

including discrimination between the thrombotic and atherosclerotic plaque components. We sought to investigate the feasibility of thrombus quantification and its monitoring in patients with high thrombotic burden acute coronary syndromes.

Methods: Patients with successfully revascularized acute coronary syndromes and a large thrombus burden on initial coronary angiography who benefited from repeated TD-OCT examinations in our institution were suitable for inclusion. Coronary lesion stenosis degree was determined by quantitative coronary angiography (QCA) methods. Thrombus volume, maximal surface and minimal luminal area (MLA) were quantified by serial area measurement within the athero-thrombotic culprit lesion in 1 mm intervals before any stenting.

Results: Eleven patients underwent 2 consecutive TD-OCT examinations. The OCT image quality was suitable for thrombus quantification in n=9 subjects (89% men/ age=62.4±5.7y/ 89% STEMI). All patients were under anticoagulant and dual antiplatelet therapy between the two procedures (mean delay: 4.1±0.4 days). No adverse events were observed following OCT analysis.

We measured a progressive reduction of thrombus burden between the two analysis, as assessed by the decrease of thrombus volume (5.3 ± 1.7 vs. 11.0 ± 3.4 mm³, $p=0.004$), length (7.4 ± 1.0 vs. 10.9 ± 1.8 mm, $p=0.02$) and increase of MLA (2.5 ± 0.6 mm² vs. 1.8 ± 0.3 mm², $p=0.02$). However, the degree of stenosis analyzed by QCA didn't significantly decrease over time ($49.7 \pm 4.6\%$ vs. $55.7 \pm 6.6\%$, $p=0.15$). The thrombus volume reduction was time dependent, as witnessed by the high correlation between the percentage of thrombus volume decrease and the delay between analysis ($R=0.87$, $p=0.002$). The observed thrombus volume reduction rate was evaluated to 12% of the initial volume per day under medical therapy.

Conclusion: TD-OCT assessment of thrombus volume in patients with ACS is feasible, safe and could allow in vivo clot regression monitoring.

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Observatoire Français des Syndromes de TakoTsubo (OFSETT): A French registry of TakoTsubo syndrome in non-academic hospitals

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Background: We report on the management of and processes of care in consecutive patients with Takotsubo syndrome using data from a French registry (OFSETT).

Methods: Between November 2010 and December 2011, 15 non-academic hospitals included consecutive patients diagnosed with Takotsubo syndrome according to the Mayo clinic diagnostic criteria.

Results: A total of 121 patients were enrolled: 89% were women and the mean age was 72±12 years. Most of the women (89%) were >50 years' old; 8% of patients had diabetes, 30% were current smokers and 52% had hypertension. Symptoms of Takotsubo syndrome were chest pain (81%), dyspnoea (27%) and/or syncope (5%). The mean maximum troponin level was 7.8 ng/mL and the mean maximum B-type natriuretic peptide level was 1013 pg/mL. ECG showed a negative T wave in 73%, ST elevation in 42% and/or a new Q wave in 29% of patients. One patient was treated with fibrinolysis. Coronary angiography was performed in all patients. Coronary arteries were angiographically normal in 78% of patients and showed <50% stenosis in 22%. Left ventricle (LV) angiography showed apical ballooning in 35% of patients. The mean LV ejection fraction was 42±13% on echocardiography and 46±10% on angiography. The target event was identified in 55% of the patients: mental stress in 61% and physical stress in 29%. In-hospital treatment included nitrates (11% of patients), unfractionated heparin (25%), low-molecular-weight heparin (79%), aspirin (91%), antiplatelets (82%), and angiotensin-converting enzyme inhibitors/angiotensin receptor inhibitors (ACE/ARB) (75%). None of the patients died during hospitalization. At discharge, patients were treated with aspirin (59%), statins (46%), beta-blockers (75%), ACE/ARB (79%) and/or neurotropic agents (26%).

Conclusion: These observational data from 15 non-academic French hospitals provide insights into the characteristics of patients with Takotsubo syndrome and current processes of care for this population.

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In type 2 diabetic patients at goal for LDL-cholesterol, atherogenic dyslipidemia is associated with an increased risk of asymptomatic coronary artery disease

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Objective: To investigate whether elevated triglycerides and low high-density lipoprotein (HDL) cholesterol (atherogenic dyslipidemia) are predictive of risk for silent myocardial ischemia (SMI) or angiographic coronary artery disease (CAD) in asymptomatic patients with type 2 diabetes.

Methods: Cohort study in 1080 asymptomatic patients with type 2 diabetes, a normal 12-lead resting electrocardiogram (ECG), at least one additional cardiovascular risk factor and low density lipoprotein (LDL) cholesterol <3.4 mmol/L. Patients initially underwent screening for SMI by ²⁰¹thallium myocardial scintigraphy after an ECG stress test, a pharmacological stress test (dipyridamole injection), or both. Patients with SMI underwent coronary angiography.

Results: SMI was detected in 292 patients and CAD in 91 patients. Overall, 60 (5.5%) patients had atherogenic dyslipidemia (triglycerides ≥ 2.04 g/l mmol/L and HDL cholesterol ≤ 0.34 g/l), which was associated with SMI (40.0 vs 26.3%, $p<0.001$) and CAD (22.2 vs 8.3%, $p<0.001$). In multivariate analyses taking into account the parameters associated in univariate analyses with SMI and then CAD, SMI was associated with atherogenic dyslipidemia (odds ratio 1.8[1.0-3.3]), male gender (OR 2.1[1.5-2.9]), BMI (OR 0.97[0.94-1.00]), retinopathy (OR 1.4[1.1-1.9]), peripheral occlusive arterial disease (POAD: OR 2.5[1.6-3.8]) and mean blood pressure (OR 1.01[1.00-1.03]); CAD was associated with atherogenic dyslipidemia (OR 4.0[1.7-9.2]), male gender (OR 3.0[1.6-5.6]), BMI (OR 0.94[0.90-1.00]), retinopathy (OR 1.7[1.0-2.9]), POAD (OR 4.0[2.1-7.4]) and mean blood pressure (OR 1.03[1.01-1.05]). In the subgroup of 584 patients at LDL cholesterol <2.6 mmol/L, CAD was also independently associated with atherogenic dyslipidemia (2.96 [0.97-9.03], $p=0.06$).

Conclusions: In type 2 diabetic patients including those at LDL cholesterol goal, atherogenic dyslipidemia is associated with an increased risk of silent CAD. Management targeted to this dyslipidemic profile may help to reduce the high residual burden of cardiovascular disease.

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Platelet reactivity predicts both ischemic and bleeding events at one year follow-up in acute coronary syndrome patients receiving prasugrel

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There are evidences of a link between platelet reactivity inhibition and thrombotic and bleeding events. We have previously demonstrated that PR after prasugrel loading dose (LD) predicts short-term thrombotic events. We aimed to further investigate the relationship between PR under prasugrel and one-year thrombotic and bleeding events.

Method: Patients were prospectively included in this multicentre study if they had a successful PCI for an acute coronary syndrome (ACS) and received prasugrel. Vasodilator-Stimulated Phosphoprotein (VASP index) was measured after prasugrel LD. Endpoint included the rate of thrombotic events (cardiovascular death, myocardial infarction and stent thrombosis) and bleeding events (TIMI) at one year.